

Chapter 6 - Questions

Q1 What is propagation?

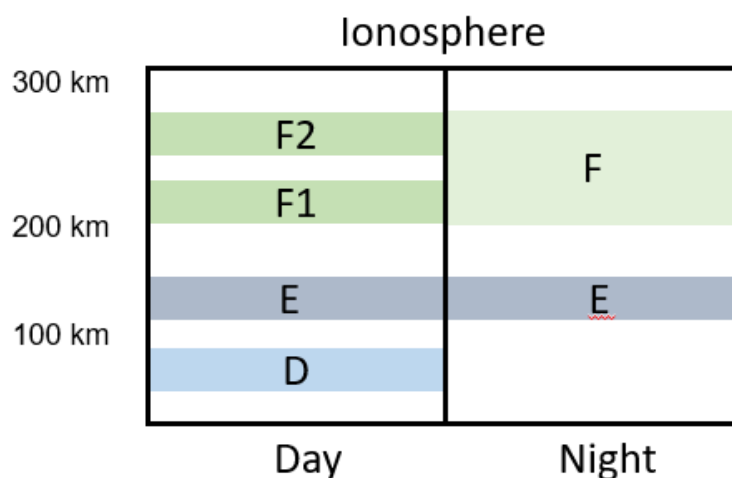
Propagation is defined as the movement of radio waves from a transmitter to a receiver.

Q2 What is a direct wave?

Direct wave or line of sight wave travel in a straight line from the transmitting antenna to the receiving antenna.

Q3 The ionosphere reduces to two main layers at night, What are these layers?

E and F layer



Q4 What is the MUF?

Maximum useable frequency. The Critical Frequency is tested vertically. Signals transmitted around the world are not aimed vertically but at an angle to the earth or at low angles of incidence. These sky waves can propagate over great distances. The maximum usable frequency (MUF) is the maximum frequency you can use at that time to achieve the skip. Frequencies above the MUF will go through the ionosphere and is lost.

Q5 Are HF communications better or worse when there is high sunspot activity and explain your answer?

Sunspots will increase during the “solar maximum” and decrease near the “solar minimum.” Below is a chart copied from the Bureau of Meteorology site and shows the sunspot activity is approaching a peak.

The higher HF bands will be more successful with skip propagation during the years near solar maximum. Some of these higher HF bands may not open during the lower activity portions of the solar cycle.

